Timothy S. Lewis, Ph.D.

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PROFESSIONAL EXPERIENCE:

Seattle Genetics, Inc. – Bothell, WA (www.seagen.com) Seattle Genetics produces antibody-based therapies for the treatment of cancer and autoimmune diseases. The Molecular Oncology and Immunology Department discovers new oncology targets and provides preclinical data packages for antibodies and antibody drug conjugates (ADCs) enroute to clinical trials.

Principal Scientist, Molecular Oncology and Immunology September 2008 to present
Responsibilities-

- Mechanism of action studies for SeaGen's monoclonal antibody and ADC therapeutic drug candidates
- Research lead for the anti-CD40 mAb dacetuzumab (SGN-40) program in collaboration with Genentech (Roche)
- Research efforts focused on identifying new antigen targets and antibodies suitable for development of novel ADCs
- Research efforts to identify small molecule drugs and biologics capable of producing synergy in combination with auristatin-based ADCs
- Supervise one senior research associate (2007-present).

Senior Scientist, Molecular Oncology and Immunology March 2005 to Sept. 2008
Responsibilities-

- Investigate the apoptotic mechanism of action of dacetuzumab (SGN-40) mediated cell killing in NHL (*in vitro* and in *vivo*). Identified novel signaling mechanisms and demonstrated chemosensitization activity of this clinical mAb. Evaluated the activity of dacetuzumab in combination with chemotherapies in multiple myeloma.
- Lead the dacetuzumab research subteam, proposing research plans and reporting data internally and at scientific conferences.
- Characterized the signaling properties of the anti-CD33 mAb lintuzumab (SGN-33) in AML cell lines and patient samples.
- Evaluated two carcinoma expressed cell surface proteins as potential new ADC targets.
- Conducted detailed analysis of the kinetics of ADC internalization, trafficking and drug linker cleavage using live cell flourescence microscopy.

CEPTYR, Inc. – Bothell, WA (www.ceptyr.com) CEPTYR was a company focused on the development of drugs against protein tyrosine phosphatases (PTPs). The mission of the Discovery Biology department was to identify PTP targets suitable for the development of small molecule oncology drugs.

Scientist II, Discovery Biology Department, CEPTYR March 2003 to Nov. 2004
Responsibilities-

- Biology leader on the CDC14A phosphatase oncology drug development project team.
- Oversaw an RNAi-based effort which successfully validated CDC14A as a target

suitable for oncology drug development.

- Routinely presented data to project teams, directors, and scientific advisory board members.
- Produced protein expression profiles for potential phosphatase targets in a broad array of cancer cell lines.
- Supervised one research associate level direct report (2002-2004).

Scientist I, Discovery Biology Department, CEPTYR Nov. 2000 to March 2003
Responsibilities-

- Implemented proteomic technologies at CEPTYR as part of an effort to validate novel phosphatases and identify phospho-protein substrates. Brought high sensitivity protein mass spectrometry (LC-MS/MS) to the company.
- Coordinated with a molecular biology effort to clone and create substrate trapping mutants for the entire DSP/PTP family. Substrate trapping mutants were used in the isolation and identification of physiological phospho-protein substrates.
- Examined protein interactors of selected PTPs (affinity purification, MS, Y2H).
- Collaborated with outside scientists to combine CEPTYR's substrate trapping technology with ICAT (isotope coded affinity tag) technology for higher through-put PTP substrate identification.

Graduate Student, University of Colorado, Boulder Sept. 1993 to May 2000
Thesis work- (Dr. William S. Dynan 1994-1995; Dr. NatalieG. Ahn 1996-2000)

- Applied emerging proteomic techniques to detect and identify downstream effectors of the MAPK pathway in a hematopoietic differentiation system.
- Identified 20 novel protein substrates of the MAPK pathway by high sensitivity mass spectrometry.
- Evaluated specificity of the U0126 MAPK Kinase small molecule inhibitor for blocking the ERK1/2 MAPK signaling pathway.

EDUCATION:

University of Colorado at Boulder, Department of Chemistry & Biochemistry
Ph.D. in Biochemistry (2000) [GPA = 3.87]

Oregon State University
B.S. in Biochemistry & Biophysics (1993), Magna Cum Laude [GPA = 3.71]

PUBLICATIONS:

Anti-leukemic activity of lintuzumab (SGN-33) in preclinical models of acute myeloid leukemia. Sutherland M.K., Yu C., **Lewis T.S.**, Miyamoto J.B., Morris-Tilden C.A., Jonas M., Sutherland J., Nesterova A., Gerber H.P., Sievers E.L., Grewal I.S., and Law C.L. (2009) mAbs, vol. 1(5), pp. 476-485.

Lysosomal trafficking and cysteine protease metabolism confer target-specific cytotoxicity by peptide-linked anti-CD30-auristatin conjugates.

Sutherland M.S., Sanderson R.J., Gordon K.A., Andreyka J., Cerveny C.G., Yu C., **Lewis T.S.**, Meyer D.L., Zabinski R.F., Doronina S.O., Senter P.D., Law C.L., and Wahl A.F. (2006) Journal of Biological Chemistry, vol. 281(15), pp. 10540-10547.

The characterization of protein post-translational modifications by mass spectrometry. (Review) Schweppe R.E., Haydon C.E., **Lewis T.S.**, Resing K.A., Ahn N.G. (2003) Accounts of Chemical Research, vol. 36(6), pp. 453-461.

Mitotic phosphorylation of Golgi reassembly stacking protein 55 by mitogen-activated protein kinase ERK2.
Jesch S.A., **Lewis T.S.**, Ahn N.G., Linstedt A.D. (2001) Molecular Biology of the Cell. vol. 12(6), pp. 1811-1817.

Identification of Novel MAP Kinase Pathway Signaling Targets by Functional Proteomics and Mass Spectrometry.
Lewis T.S., Hunt J.B., Aveline L.D., Jonscher K.R., Louie D.F., Yeh J.M., Nahreini T.S., Resing K.A., Ahn N.G. (2000) Molecular Cell. vol. 6(6), pp. 1343-1354.

Signal Transduction Through MAP Kinase Cascades. (Review)
Lewis, T.S., Shapiro, P.S., and Ahn, N.G. (1998) Advances in Cancer Research, vol. 74, pp. 49-139.

Cross-Cascade Activation of ERKs and Ternary Complex Factors by Rho Family Proteins.
Frost, J.A., Steen, H., Shapiro, P., **Lewis, T.S.**, Ahn, N.G., Shaw, P.E., and Cobb, M.H. (1997) The EMBO Journal, vol. 16, pp. 6426-6438.

Mass Spectrometric Analysis of 40 S Ribosomal Proteins from Rat-1 Fibroblasts.
Louie, D.F., Resing, K.A., **Lewis, T.S.**, Ahn, N.G. (1996) The Journal of Biological Chemistry, vol. 271, pp 28189-28198.

PATENTS:

Methods of Using CD40 Binding Agents (International Filing Date: December 11, 2006) Inventors: Drachman, Jonathan; Law, Che-Leung; **Lewis, Timothy**. International Publication Number: WO 2007/075326 A2 ; International Application Number PCT/US2006/047308. Applicant: Seattle Genetics, Inc.

Methods of Treating Neoplastic, Autoimmune and Inflammatory Diseases (International Filing Date: November 2, 2007) Inventors: Drachman, Jonathan, G. ; Sutherland, May, Kung ; Sievers, Eric ; Risdon, Grant ; Oflazoglu, Ezogelin ; Wahl, Alan ; **Lewis, Timothy**. International Publication Number: WO/2008/058021 ; International Application Number PCT/US2007/083508. Applicant: Seattle Genetics, Inc.